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A NOTE ON STELLARIA PUBERA MICHX.

C. A. WEATHERBY.

An attempt to name accurately a *Stellaria* found growing as an introduced plant at Wilton, Conn., by Miss Anna E. Carpenter and persistent there for at least six years, has involved me in a survey of the forms referred to *S. pubera*, which, though necessarily somewhat cursory, has yielded results perhaps worth recording. Through the kindness of Dr. W. R. Maxon, I have had the privilege of examining the material of *S. pubera* in the United States National Herbarium; and Mr. C. C. Deam has generously lent me the fine representation of the species in his private herbarium.

Although varying much in leaf-form, the great majority of specimens from east of the Alleghanies are constant in the following characters. The median leaves of the flowering stems are sessile or subsessile and not over 4 cm. long. The larger, oblong-lanceolate to broadly oval leaves of the sterile shoots are likewise sessile or subsessile. The sepals are 4–5 mm. long (rarely a little longer), broadly ovate to oblong-ovate or rarely oblong-lanceolate, obtuse to acutish, and, though often pilose on the back, are not ciliate or only slightly and inconspicuously so at the very base. They are usually shorter than the petals. This common form is, as indicated by Michaux's description and his type locality, no doubt typical S. pubera.

At scattered stations nearly throughout the range of the species occur larger plants in which the oblong-lanceolate to broadly oval median leaves of the few-flowered fertile stems are 6-11 cm. long and the sepals generally 5-6 mm. long. This is Alsine pubera ten-

nesseensis Mohr, as shown by his description and his type specimen (now in the U. S. Nat. Herb.) collected at Sheffield Landing, Ala., June, 1893, and labelled "v. tennesseensis" by him.

The status of this form is not wholly clear to me; but the specimens at hand appear to be either luxuriant individuals or late, semi-sterile shoots. The latter interpretation is borne out by the following facts. Some of the specimens, including Mohr's type, were collected in June and July, well past the usual flowering time of the species. A sheet collected near Baltimore, Md., July 7, 1897 (U. S.), is labelled by the collector, Adam Seitz, "Stellaria pubera Michx. in its second form." A specimen collected at Waynesville, N. C., by T. G. Harbison in May, 1897 (G), shows a large-leaved shoot in flower and two stems of entirely typical S. pubera in immature fruit proceeding from the same root. From the data at hand, I cannot see that this form deserves any taxonomic recognition.

West of the Alleghanies, ranging (so far as the specimens seen indicate) from northern Alabama to southern Ohio and southeastern Indiana, is found a much more marked variant. In it at least the lower leaves of the flowering stems and all but the uppermost leaves of the sterile ones have the oval to broadly ovate blades abruptly contracted into margined petioles or petiolar bases 1–2 cm. long. The sepals are 7.5–11 mm. long, acute or acuminate; they equal or exceed the petals and at least the outer are conspicuously long-ciliate on the lower half. This, as shown by the description and collections cited, is Stellaria pubera, subsp. silvatica Béguinot. Small's excellent diagnosis leaves no doubt that it is also his Alsine tennesseensis, to which he has erroneously applied Mohr's name.

The characters of pubescence and leaf-form adduced by Béguinot do not correlate in a large series of specimens; those of calyx and leaves, however, are associated with a high degree of consistency. The plant constitutes a well-marked geographic variety. Perhaps it even deserves the specific rank accorded it by Small; but its characters seem hardly positive enough for that. Occasional individuals of otherwise typical S. pubera show a tendency to develop petiolar leaf-bases; in a few cases the sepals are narrow, acute, and more or less ciliate; and in length of sepals different specimens show an unbroken progression from 5 to 11 mm. One plant in particular, collected by A. H. Curtiss in Fairfax Co., Va. (G), and showing ovate,

short-petioled leaves and broadly ovate, somewhat ciliate sepals 7 mm. long, is almost exactly intermediate between species and variety.

I have not been able to identify Béguinot's subsp. homotricha.

The conclusions here reached may be summarized as follows. Prof. Fernald (Rhodora xxi. 7–9 [1919]) has well set forth the reasons why the generic name *Stellaria* is to be preferred to *Alsine* for the species of this group.

* Median leaves of both sterile and flowering shoots rounded or narrowed at the sessile or subsessile base, oblong-lanceolate to oval; sepals 4–6 mm. long, obtuse or acutish, shorter than the petals, not at all or only inconspicuously ciliate.

Stellaria pubera Michx. Fl. Bor. Am. i. 273 (1803). Alsine pubera tennesseensis Mohr, Cont. Nat. Herb. vi. 499 (1901). Alsine tennesseensis Small, Fl. S. E. U. S. 422 (1903), as to name-bringing synonym.—N. J. to Ind., south to Ga. and Ala.

** Median leaves of sterile shoots abruptly contracted into petioles 1–2 cm. long, oval to broadly ovate; sepals 7.5–11 mm. long, acute or acuminate, equalling or exceeding the petals, at least the outer conspicuously ciliate on the lower half.

Var. silvatica (Béguinot), n. comb. S. pubera, subsp. silvatica Bég. Nuov. Giorn. Bot. Ital. n. s. xvii. 385 (1910). Alsine tennesseensis Small, l. c., as to plant described.—Connecticut (where introduced); dooryard, Wilton, April, 1923, Anna E. Carpenter (G). Ohio: Chillicothe, May, 1885, H. T. Safford (US); near Cincinnati, April 27, 1879, C. G. Lloyd (US). Indiana: wooded ravine near Lawrenceburgh, Dearborn Co., May 10, 1910, Deam (herb. C. C. Deam). Kentucky: cliffs of the Kentucky River, May, 1830, H. H. Eaton (G). Tennessee: bluffs along the Tennessee River, Knoxville, April, 1894, S. N. Bain (US); same locality, April, 1895, Ruth (G).

GRAY HERBARIUM.

THE NAME OF THE SPEARMINT.

S. F. BLAKE.

In a recent paper in this journal, Mr. O. A. Farwell¹ has sought to show that the name *Mentha spicata* L., in general use for the spearmint for many years, belongs to the horse mint of Europe, usually called *M. longifolia*, and that the spearmint should be called *M. viridis*. In this interpretation of the Linnaean name Farwell departs

^{1&}quot;The correct name for the spearmint," Rhodora 26: 19-22. 1924.

not only from the usage of Hudson,¹ the first reviser of the complex Linnaean species M. spicata, but also from that of such critical modern students of the European flora as H. and J. Groves (Babington's Manual, ed. 9), Britten and Rendle (List of British Seed-plants, 1907), Schinz and Keller (Flora der Schweiz, ed. 4, 1923), and Wilmott (Babington's Manual, ed. 10), as well as from the practice of all recent American authors.

In the first edition of the Species Plantarum (1753) Linnaeus described Mentha spicata with three varieties—α. viridis, β. longifolia, and γ. rotundifolia. Hudson (1762), the next author to deal with these plants, raised the three varieties to specific rank. His species, corresponding to the Linnaean varieties in the order named, were called M. spicata, M. longifolia, and M. rotundifolia. In the second edition of the Species Plantarum (1763), Linnaeus split his Mentha spicata of 1753 into three species, as Hudson had done, but dropped the name spicata. Var. longifolia of 1753 became Mentha sylvestris, var. viridis became M. viridis, and var. rotundifolia became M. rotundifolia. As the pertinent descriptions in both editions of the Species Plantarum are copied in full by Mr. Farwell, it is unnecessary to reproduce them here.

Mr. Farwell evidently considers that the name Mentha spicata, as used by Linnaeus, represented an entity different from the three varieties included under it. His sole argument for the transfer of the name to the plant called M. sylvestris in the second edition of the Species Plantarum is given as follows: "of the eight citations under M. sylvestris six are from the var. longifolia and one from M. spicata the other being extraneous," while "of the seven citations under M. viridis 5 are from var. viridis (none from M. spicata), the others being extraneous." The fact that, of the two references given under M. spicata proper in 1753, the only one that is repeated in 1763 is placed under M. sylvestris, is considered to show that "M. spicata formed a part of M. sylvestris and not at all of M. viridis."

The reference on which Mr. Farwell lays so much stress is that from the Hortus Upsaliensis, "Mentha floribus spicatis, foliis oblongis serratis." Under this name Linnaeus combined, as var. α and var. β , two plants which he had previously treated as species in the Hortus Cliffortianus. The Hortus Upsaliensis name, then, was merely a

¹ Fl. Angl. ed. 1, 221. 1762.

descriptive phrase intended to cover the common characters of the two varieties of which it was composed. The *Mentha spicata* of the first edition of the Species Plantarum was made up of the same two varieties and an additional one, and the Hortus Upsaliensis name was properly taken by Linnaeus as his specific phrase, covering as it did the two principal constituents of his species *M. spicata*. In this sense, and in this sense only, is Mr. Farwell right in saying that "*M. spicata* was founded on Hort. Ups. 168 [sp. no. 2]." The other citation under *M. spicata* proper, "Mentha sylvestris, longioribus nigrioribus & minus incanis foliis. Bauh. pin. 227," was omitted in the second edition of the Species Plantarum. W. Sole, in his "Menthae Brittanicae" (1798, p. 7), refers it to his *M. sylvestris* which, according to Baker (Journ. Bot. 3: 235. 1865), is *M. rotundifolia*, Sole's *M. rotundifolia* being *M. alopecuroides* Hull.

The explanation of Linnaeus' course is thus sufficiently clear. The name $Mentha\ spicata$ of 1753 was simply a covering name for the three varieties included under it, as is shown both by his division of the species into vars. α , β , and γ , and by his use as a specific phrase of a polynomial under which he had previously combined two of these three varieties. In 1763, realizing that his three varieties were specifically distinct, he dropped the name spicata (in which course he was followed by most botanists for about a century) and raised the varieties to species under the names $M.\ viridis$, $M.\ sylvestris$, and $M.\ rotundifolia$. The principal reference given under $M.\ spicata$ in 1753 was placed under $M.\ sylvestris$ (presumably because var. α of the Hortus Upsaliensis reference represented this plant), but this action can by no means be taken to indicate that Linnaeus considered $M.\ spicata$ referable in toto to $M.\ sylvestris$.

The single argument advanced in support of the transfer of the name M. spicata to the plant usually known as M. longifolia is thus shown to be invalid, while the customary application of the name is supported by two further points:—the fact that var. α of M. spicata, which, other things being equal, would be considered to typify the species, is var. viridis; and the fact that Hudson, the first reviser of the complex Linnaean species, retained the name M. spicata for the spearmint (M. spicata L. α . viridis L.).

It happens that the name of the spearmint is mentioned in the International Rules of Nomenclature as an example under Art. 49, but with an authority assigned that is not in accord with present usage. The statement there made is as follows: "Mentha spicata L. var. viridis L. Sp. Pl., ed. 1, p. 576 (1753) was raised to the rank of a species by Hudson, and must be called Mentha spicata Huds. Fl. Angl. ed. 1, 221 (1762) not Mentha viridis L. Sp. Pl., ed. 2, p. 804 (1763)." It is perhaps impossible to decide whether var. viridis "was raised to the rank of a species by Hudson," as his first reference might indicate, or whether he considered the Linnaean M. spicata to be typified by its var. α. viridis and adopted his specific name accordingly. At any rate, it is certain that the plant can not be called "Mentha spicata Huds." under any code of nomenclature in present use.

The customary citation of the accepted names of the two other mints described as varieties of M. spicata by Linnaeus, as Mentha longifolia (L.) Huds. and M. rotundifolia (L.) Huds., is based on the natural inference that Hudson's names were founded on those of Linnaeus. It is by no means clear, however, that this method of citation is correct. It is obvious that Hudson had the Species Plantarum before him when writing his descriptions. The omission of his customary reference to that work under these two species, however, involves the omission of anything that could be considered a "name-bringing synonym," since the citations from pre-Linnaean authors common to the two works can certainly not be regarded in that light. In neither the International Rules nor the American Code is there any statement as to the definiteness of reference to the earlier name required in nomenclatorial transfers in order to justify the use of a parenthetical authority. The question is a minor one, and very likely was not considered by the framers of either code. The commonly used expression "name-bringing synonym" certainly implies some sort of citation, and the fairly well established practice of not reading into a work more than the author himself put there points in the same direction. The mints described in the first edition of the Species Plantarum as Mentha spicata, a. viridis, B. longifolia, and \gamma. rotundifolia are then properly designated as follows:

Ментна spicata L. Sp. Pl. 2: 576. 1753.

Mentha spicata a. viridis L. Sp. Pl. 2: 576. 1753. Mentha viridis L. Sp. Pl. ed. 2, 2: 804. 1763. Mentha longifolia Huds. Fl. Angl. 221. 1762.
Mentha spicata β. longifolia L. Sp. Pl. 2: 576. 1753.
Mentha sylvestris L. Sp. Pl. ed. 2, 2: 804. 1763.
Mentha rotundifolia Huds. Fl. Angl. 221. 1762.
Mentha spicata γ. rotundifolia L. Sp. Pl. 2: 576. 1753.
Bureau of Plant Industry, Washington, D. C.

NOTES ON THE PLANTS OF HINGHAM, MASSACHUSETTS.

CLARENCE H. KNOWLTON.

When the History of Hingham was published by the town in 1893, there was included in it "The Botany of Hingham," by Thomas T. Bouvé, and "The Trees and Shrubs of Hingham," by his son, Edward T. Bouvé. Both of these men were long connected officially with the Boston Society of Natural History. Charles J. Sprague, the artist-botanist, coöperated with the elder Bouvé in the preparation of the Flora, and local botanists also assisted. The list is based on the sixth edition of Gray's Manual (1890).

No less than 877 plants are given, making it a very complete list for an area of 12,973 acres. There seem to be very few errors, although many of the species have subsequently had their names changed, and there have been many new segregates since 1890. Since I came to Hingham in 1908, and since Dr. C. A. Cheever came in 1917, each of us has explored the town, and each of us has kept a check-list of the local flora. There are still many species which we have not checked off, but we have succeeded in finding many of the plants which were reported as rare, and we have added several new species, not merely segregates, to the known flora of the town.

Five of the plants in the flora, Asclepias verticillata, A. tuberosa, Gentiana crinita, Sarracenia purpurea and Sporobolus asper are apparently extinct, and three others, Phragmites communis, Kalmia latifolia and Epigaea repens are nearly gone, while Ilex opaca is making a hard fight against being eliminated by the Christmas spirit.

Along the shore, in salt marsh openings, is an abundance of Sali-cornia ambigua, the perennial, along with the two annual species of the region. The young shoots of this plant, before they root into the sand, are curved, forming almost perfect circles for a few weeks be-

fore they are fully developed. Atriplex arenarium is frequent, and Aster tenuifolius, with its pretty daisy-like flowers, is in at least one of the marshes. Last fall we were much pleased to find Bassia hirsuta, so common in South Boston, sparingly introduced close to the salt water, and near by Euphorbia polygonifolia in the sand. There are also a few plants of the big mallow, Hibiscus Moscheutos. Just back from salt water grows the pretty pink Strophostyles angulosa.

Near the salt marsh, not far from its two parents, there are plants of the hybrid Solidago asperula, always an interesting find. At one place, the cottage settlement of Wampatuck, there is an abundance of the rare S. speciosa, growing among the low oaks and in the vacant lots. S. suaveolens is especially abundant in some places. In the southern part of Hingham there is plenty of S. rugosa, var. sphagnophila, and one of the commonest species is S. Elliottii, which drops out to the north, only to reappear again in Nova Scotia.²

Asclepias phytolaccoides is frequent by wooded roadsides, a tall, handsome plant. A. quadrifolia is a rarer plant which is sometimes found. A. verticillata, the rarest species around Boston, I found in some abundance on ledges when I first came to town, but I have not been able to find it recently. Triosteum perfoliatum we found last summer, growing in a thicket on an esker. It was 120 cm. tall, and is in many ways quite different from var. aurantiacum (Bickn.) Eames & Wiegand which is commoner in eastern Massachusetts, though it has not been found here. Ludvigia alternifolia is a queer plant, growing in two places, one beside a rivulet in dry open woods, the other close to the railway track in the village, as if introduced there.

One of our friends, Mr. Cyril C. Smith, has called our attention to the variation in the number of leaves in the whorls of *Lysimachia quadrifolia*. This is exceedingly abundant in dry open woods, Although the great majority of the plants have four leaves to each whorl, there are numerous variants, having two, three, five, six, and even seven leaves.

One of the best discoveries was Corallorhiza trifida, which Dr. Cheever found near a cold spring, a situation similar to the place where it grows in Norwood. Arethusa bulbosa was also found by him in a small bog, and in the same bog is Rhododendron canadense, a rare

¹ Rhodora xi. 120, 1909; xvii. 176, 1915.

² Fernald, Rhodora xxiii. 144, 151, 157, 169, 292, 1921.

plant in Plymouth County. In this same bog Dr. Cheever has also found *Habenaria lacera* and *Calopogon pulchellus*. *Habenaria flava* is another rare orchid we have seen in town.

In one of the swamps is *Carex riparia*, frequent in western Vermont, but not so well known in eastern Massachusetts. It has blue-green leaves, and looks quite distinct from the abundant *C. stricta* and the other sedges in the swamp. On one of the eskers, and in another place in light pine woods, there are good colonies of *C. laxiculmis*.

There are twenty-three kinds of ferns known in town. Thelypteris simulata, Woodwardia virginica and W. areolata are frequent, this association of the three species being characteristic of low woods near the coast as far north as New Hampshire. Thelypteris Boottii was for some reason overlooked by the authors of the list in their survey of the town. Dr. Cheever has found one good colony of Adiantum pedatum, not on the list. Lycopodium inundatum is abundant at one station. L. annotinum is on the Bouvé list, and after a careful search was found in two stations a quarter of a mile apart, in deep woods.

All in all we have had a very good time checking up this old list, and we hope to continue our explorations till we have as complete a knowledge of the town flora as did Mr. Bouvé and his associates.

HINGHAM, MASSACHUSETTS.

A NEW VARIETY OF BIDENS HETERODOXA.

NORMAN C. FASSETT.

The fresh-water tidal flats at the mouth of the Kennebec River, in central Maine, extend from a mile above Bath to Augusta, a distance of nearly thirty miles. The lower part of this estuary, and the mouths of the rivers entering it, have been rather extensively explored. Professor Fernald and Mr. Bayard Long have collected along the tidal shores of the Cathance River at Bowdoinham, and the writer has botanized most of the western shore of Merrymeeting Bay. Large collections of Bidens made in these regions have consisted of three entities: B. hyperborea Greene, varieties colpophila (Fernald & St. John) Fernald and cathancensis Fernald, and B. Eatoni Fernald, var. kennebecensis Fernald, the last two being endemic to this estuary system.

Near the head of tide in the Kennebec River, however, in Gardiner, there appears another Bidens, which has not been found in the lower part of the estuary. The foliage of this plant resembles that of B. Eatoni, var. kennebecensis, from which it differs conspicuously in its broadly campanulate involucres and shorter and broader achenes. Its affinities seem to lie rather with B. heterodoxa of the Gulf of St. Lawrence region and southern Connecticut. This variety is intermediate in its characters between var. monardaefolia of Pocotapaug Lake, Connecticut, and var. orthodoxa of the Magdalen Islands, Quebec. From the former it may be distinguished by its much shorter involucral bracts, its smaller fruiting heads, and its consistently retrorsely barbed achenes. From the latter it differs in its strictly two-awned achenes, retrorsely barbed along the margins, and its rarely divided leaves.

BIDENS HETERODOXA (Fernald) Fernald & St. John, var. interstes, var. nov., planta 2–3 dm. alta; foliis simplicibus vel rare nonnihil 3-partitis grosse serratis petiolatis, petiolis anguste alatis 1–3 cm. longis; capitulis terminalibus 1–1.3 cm. latis; bracteis exterioribus erectis 1.3–2 cm. longis; achaeniis 5.7–7 × 1.8–2.2 mm. strigosis marginibus retrorse setosis, aristis 2 retrorse setosis.

Plant 2–3 dm. tall: leaves simple or rarely somewhat 3-cleft, coarsely serrate, on narrowly winged petioles 1–3 cm. long: terminal heads 1–1.3 cm. wide: outer involucral bracts ascending, 1.3–2 cm. long: achenes $5.7-7.0 \times 1.8-2.2$ mm., strigose, retrorsely barbed on the margins; awns 2, retrorsely barbed.—Maine: at high-tide level along the shores of the Kennebec River, $\frac{1}{2}$ mile below Gardiner, Sept. 18, 1923, N. C. Fassett, no. 852 (TPYE in Gray Herb.); tidal shores, Kennebec River, Hatchs Corners, Dresden, Sept. 9, 1924, N. C. Fassett, no. 2101.

GRADUATE SCHOOL OF ARTS AND SCIENCES, HARVARD UNIVERSITY.

Flowering Dates for Amelanchier Bartramiana.—After considerable experience in collecting other species of Amelanchier in blossom, I began to think it would be necessary to climb a mountain some spring in order to find A. Bartramiana in the right condition. It was accordingly a pleasant surprise to me, when driving through Warren, New Hampshire, May 22, 1923, to spy over in the swamp a bush of this characteristic species with white star-like flowers, quite different from A. laevis, which was everywhere in the woods and by the roadsides.

1924)

The inflorescence consists of two or three flowers coming from a single axil the pedicels sometimes branching. The leaves at this season often have the same reddish tinge which characterizes A. laevis and A. sanguinea, but the general effect of the shrub, with its snow-white star-shaped flowers, is very different. It is frequently a deuse shrub, seldom very tall.

Later the same week I found A. Bartramiana in bloom in Barton, Vermont, and still later, May 27, in Brome County, Quebec, rather past its prime. This year I was again much pleased and surprised to find it in bloom on the high sandplains between Ashburnham and Winchendon, Massachusetts, at an elevation of perhaps 1200 feet, on May 21. Crossing the State line, I found it again in Fitzwilliam, New Hampshire, at about the same elevation, and later that week in Marlow, Lempster and Grantham, along the west side highway of New Hampshire.

It is interesting to know that this species, so often associated with mountains and the northern country, is abundant at moderate elevations so far south as these stations. In summer the leaf is always characteristic. The fruit is somewhat pyriform, one to three fruits on long pedicels ripening at the upper axils. I have usually found it after the middle of July.—Clarence H. Knowlton, Hingham, Massachusetts.

A Flora of Springfield, Massachusetts.—The results of active collecting by the botanists of Springfield, Massachusetts, during the last half-century have been published by the Springfield Museum of Natural History. The actual drawing together of the material was chiefly in the hands of the late Luman Andrews, who unfortunately died before the work could be put into final form; and the finishing touches were given the manuscript by the experienced student of the flora of the Connecticut Valley, Mr. C. A. Weatherby. The Catalogue is in conventional and, therefore, thoroughly convenient form. It is accompanied by a detailed map and by ten plates, illustrating noteworthy trees. The native flora of Springfield has naturally suffered the fate of indigenous floras about any large city and the

¹ Museum of Natural History, Springfield, Massachusetts, Bulletin No. 3. Catalogue of the Flowering Plants and Ferns of Springfield, Massachusetts. By Luman Andrews and a Committee of the Springfield Botanical Society. 1924.

number of plants of foreign origin is large, although, by what seems an unfortunate lack of any differentiation in type or in statement, they do not stand apart in the Catalogue from the truly native plants. The latter form the element of greatest interest in the Springfield flora, for upon the broad sand plains east of the densely populated section of the city there are isolated stations of several coastal plain or other southern types: Chamaecyparis, Sagittaria Engelmanniana, Panicum verrucosum, P. albemarlense, Psilocarya scirpoides, Fuirena squarrosa, Scleria reticularis, Orontium aquaticum, Xyris flexuosa, Utricularia resupinata, etc. It is certainly to be hoped that land values in Springfield will not become so great as to crowd out these really interesting species of the sand plains and pond-margins. However, should that dreaded result of urban development eventually follow we have the satisfaction of knowing that specimens of all the plants listed in the Catalogue are preserved in the herbaria either of the Museum of Natural History at Springfield or of the New England Botanical Club at Cambridge. For its care in thus preserving and in putting on record the known flora of the region the Springfield Museum is to be heartily commended.-M. L. F.

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DUPLICATE BOOKS FOR SALE.	
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